

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended): A machine for placing components on a printed circuit board, comprising:

- a transport device for transporting printed circuit boards in an X-direction;
- at least one feeder area with components;
- a Y-slide, which is independently drivable in the X-direction; and
- at least two placement heads on said Y-slide,

wherein at least one of each of the at least two placement heads being adapted for placing is configured to place components from the at least one feeder area onto the printed circuit board,

wherein each of the at least two placement heads arranged on said Y-slide is configured to move in the X-direction,~~move exclusively simultaneously in the X-direction~~
and

wherein movement of a first of the at least two placement heads over a certain distance in the X-direction causes a simultaneous, dependent movement of a second of the at least two placement heads over the same distance in the X-direction, and

wherein each of the at least two placement heads is independently drivable in a Y-direction.

2. (Currently Amended): The machine as claimed in claim 1, ~~further comprising~~
comprising:

a plurality of Y-slides,

wherein each of which are the Y-slides is independently drivable in the X-direction,
and

wherein each of the plurality of Y-slides being is provided with at least two placement heads.

3. (Withdrawn – Currently Amended): A method of placing components on a printed circuit board by means of a component placement machine, the method comprising the steps of:

- in a first period of ~~time~~, time:

moving a first placement head to a desired X-Y position above a first ~~feeder~~
~~and, subsequently, feeder~~;

picking-up a component from the first ~~feeder~~, feeder using the first placement head; and

moving a second placement head along a Y-slide to a desired Y-position so as to prepare for the placement of a ~~previously picked-up~~ component previously picked up by the second placement head on the printed circuit ~~board~~, board;

- in a second period of time following the first period of ~~time~~, time:

moving the second placement head to a desired X-Y position above the printed circuit ~~board and, subsequently, board~~; and

placing the component previously picked up by the second placement head on the printed circuit ~~board~~, board;

- in a third period of time following the second period of ~~time~~, time:

moving the second placement head to a desired X-Y position above a second ~~feeder and, subsequently, feeder~~;

picking up a component from the second ~~feeder~~, feeder using the second placement head; and

moving the first placement head along the Y-slide to a desired Y-position so as to prepare for the placement on the printed circuit board of the component previously picked up by the first placement head in the first period of ~~time, and time~~; and

- in a fourth period of time following the third period of ~~time~~, time:

moving the first placement head to a desired X-Y position above the printed circuit ~~board and, subsequently, board~~; and

placing the component previously picked up by the first placement head on the printed circuit board.

4. (Withdrawn – Currently Amended): A method of placing components on a printed circuit board by means of a component placement machine, the method comprising the steps of:

- in a first period of ~~time~~, time:

moving a first series of placement heads to ~~a desired X-Y position~~ respective desired X-Y positions above a first ~~feeder~~ feeder and, ~~subsequently,~~ simultaneously ~~feeder;~~

picking up components from the first ~~feeder,~~ feeder using the first series of placement heads; and

moving a second series of placement heads along ~~one of a multitude a~~ plurality of Y-slides to ~~a desired Y-position~~ respective desired Y-positions so as to prepare for the placement on the printed circuit board of ~~previously picked up components,~~ components previously picked up by the second series of placement heads;

- in a second period of time following the first period of ~~time~~, time:

moving the second series of placement heads to ~~a desired X-Y position~~ respective desired X-Y positions above the printed circuit ~~board~~ board and, ~~subsequently,~~ board; and

placing the components previously picked up by the second series of placement heads simultaneously on the printed circuit ~~board,~~ board;

- in a third period of time following the second period of ~~time~~, time:

moving the second series of placement heads to ~~a desired X-Y position~~ respective desired X-Y positions above a second ~~feeder~~ feeder and, ~~subsequently,~~ simultaneously ~~feeder;~~

picking up components from the second ~~feeder,~~ feeder using the second series of placement heads; and

moving the first series of placement heads ~~moves along the one of a multitude~~ the plurality of Y-slides to ~~a desired Y-position~~ respective desired Y-positions so as to prepare for the placement on the printed circuit board of the components previously picked up in the first period of ~~time,~~ and time by the first series of placement heads; and

- in a fourth ~~in a fourth~~ period of time following the third period of ~~time~~, time:

moving the first series of placement heads to ~~a desired X-Y position~~ respective desired X-Y positions above the printed circuit ~~board and,~~ subsequently, board; and placing the components previously picked up by the first series of placement heads simultaneously on the printed circuit board.

5. (New): A machine for placing components on a printed circuit board, comprising:
a transport device that is configured to transport printed circuit boards in an X-direction;
a first feeder area of components that is provided adjacent the transport device;
a second feeder area of component that is provided adjacent the transport device;
one or more Y-slides each of which is independently drivable in the X-direction; and
at least two placement heads on a first of the one or more Y-slides,
wherein a first of the at least two placement heads is configured to place components from the first feeder area onto the printed circuit board,
wherein a second of the at least two placement heads is configured to place components from the second feeder area onto the printed circuit board,
wherein each of the at least two placement heads arranged on the first of the one or more Y-slides is configured to move in the X-direction,
wherein movement of the first of the at least two placement heads over a certain distance in the X-direction causes a simultaneous, dependent movement of the second of the at least two placement heads over the same distance in the X-direction, and
wherein each of the at least two placement heads is independently drivable in a Y-direction.

6. (New): The machine as claimed in claim 5, further comprising:
a plurality of Y-slides each of which is provided with at least two placement heads.